



Government of Western Australia  
Office of Energy

# Implementing Lasting Energy Savings Strategies

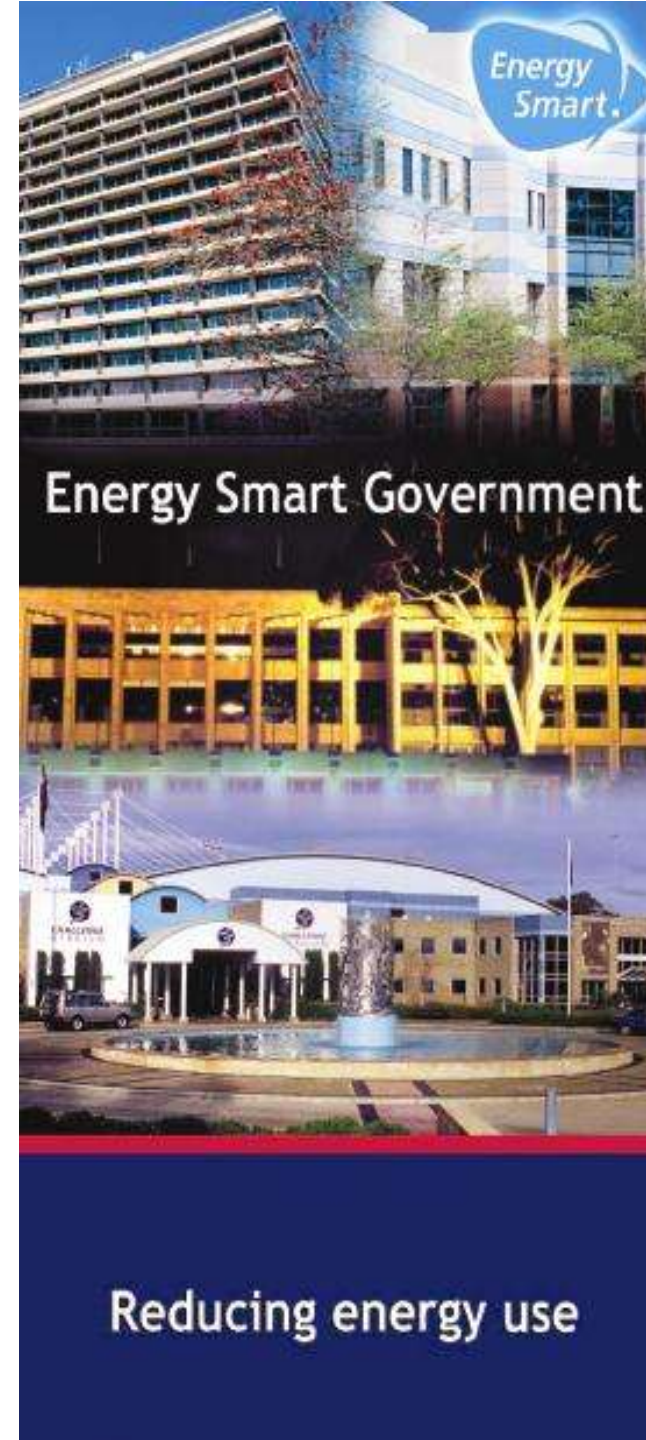
**7 Dec 2011**

**Andrew Fairs,  
Manager Business and Government**



# Outline

- The Office of Energy
- Why – the Context
- Results and Outcomes
- Lasting Energy Savings
- Energy Management Plans
- 10 Step Strategies



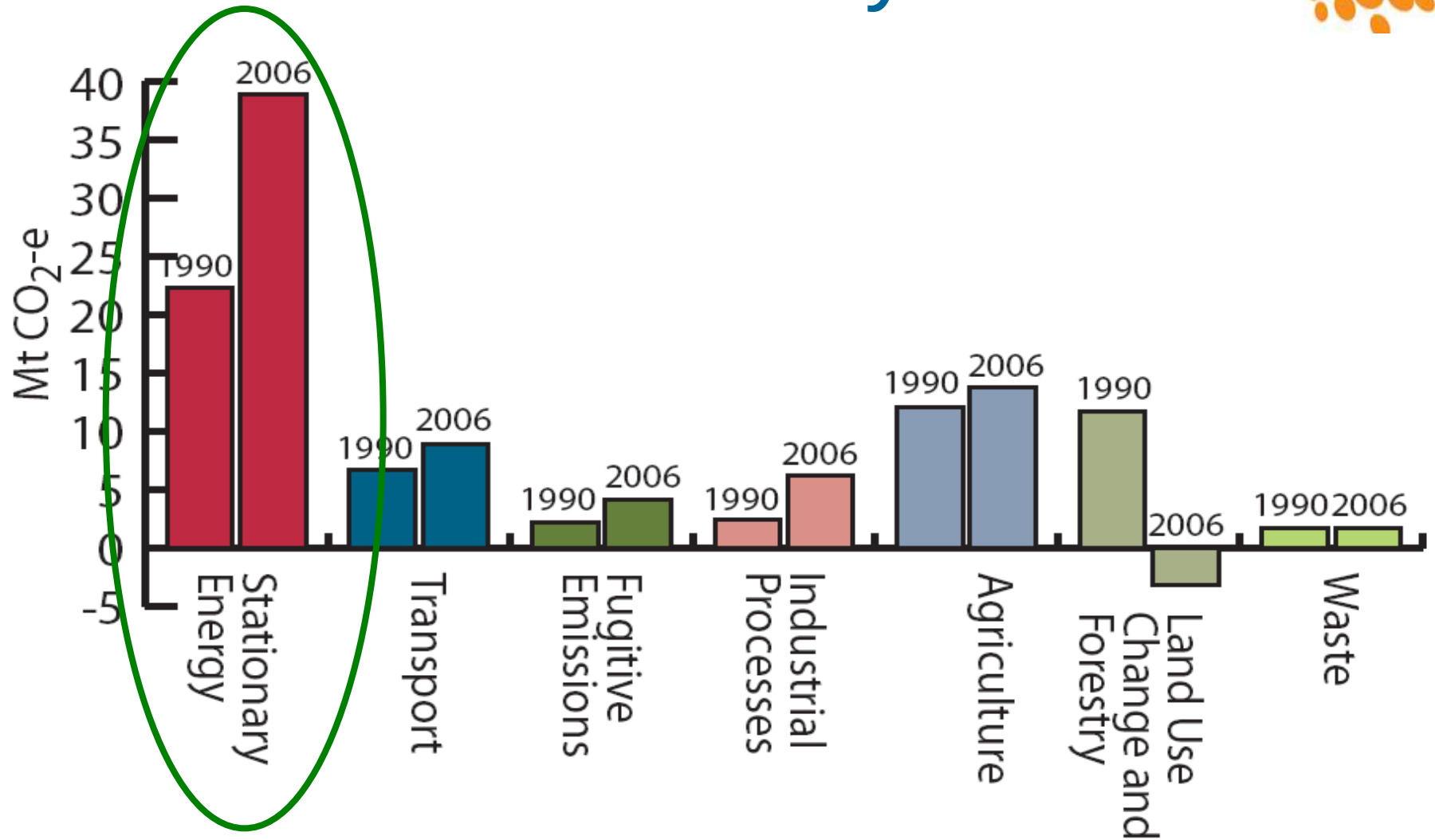
# The Office of Energy



- The **Office of Energy** leads the development and implementation of policy and programs to meet Western Australia's energy needs.
- The agency is **committed to driving change** in a way that achieves improved economic, social and environmental outcomes for Western Australia.



# WA – Emissions by Sector



# WA Government in 2002



Energy Consumption

?



Energy Cost

?



Greenhouse Emissions

?



# Energy Smart Government



Leadership

Effective management

Reduce:

- Energy
- Cost
- Emissions

Demonstrate energy efficiency



# Program Elements



2002 – 2007

Agencies with 25+ FTEs

Annual reporting

12% energy reduction target

Results tabled in Parliament



# Framework and Support



Measurement and reporting

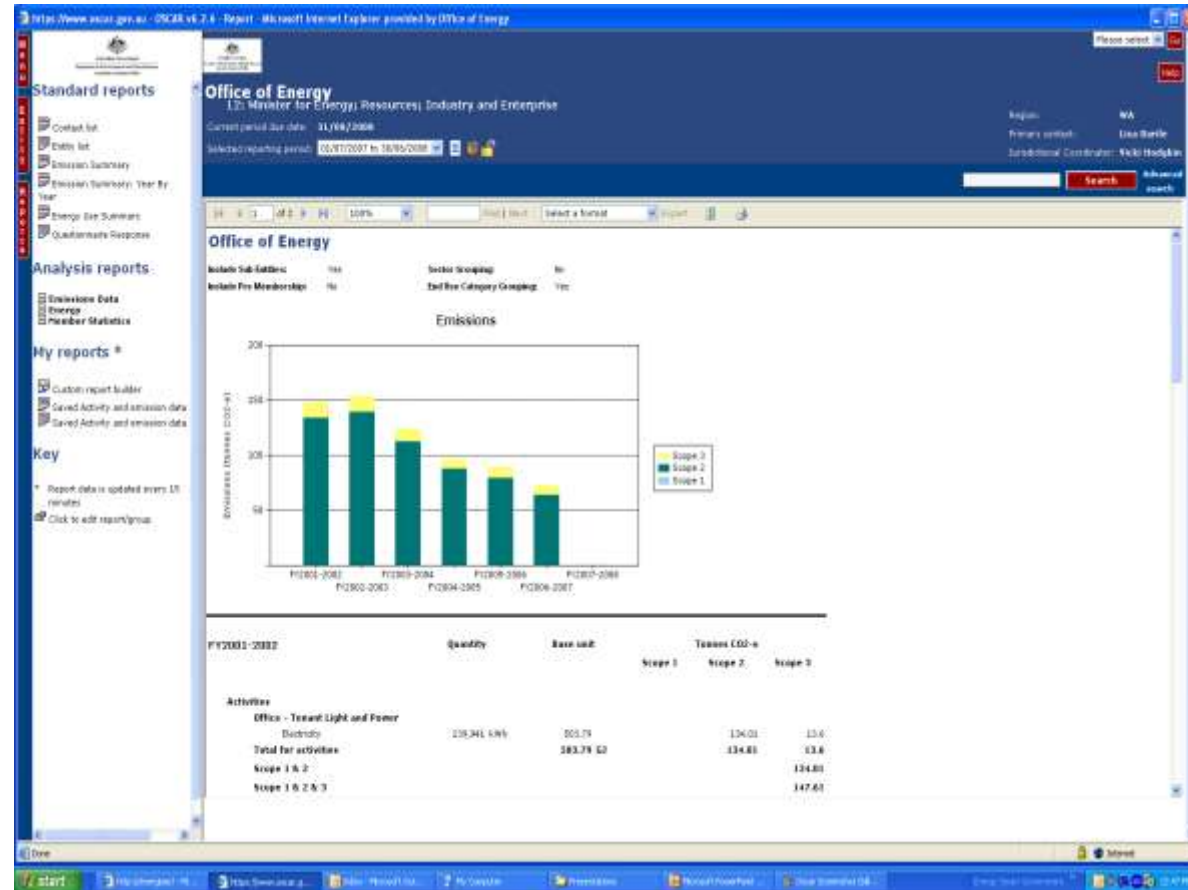
Reporting software

- OSCAR

Support :

- Energy Management Training
- Workshops
- Networking opportunities
- Technical support

Innovative approaches -  
Individual solutions



# Materials



## OSCAR ONLINE SYSTEM FOR COMPREHENSIVE ACTIVITY REPORTING

### USER GUIDE FOR ENERGY REPORTERS

August 2007



## Energy Smart Government Working Energy Smart

work  
Energy  
Smart!

The Energy Smart Government policy requires agencies to reduce energy consumption by 12% over 5 years with a 5% reduction targeted for the 2008/09 financial year. Many agencies can achieve a 5% reduction in energy use through good housekeeping measures like turning off equipment when it is not in use.

This brochure lists some simple measures that can be implemented by all staff. They require minimal effort but can make significant energy and cost savings. By reducing energy use you can also lower greenhouse gas emissions and help protect the environment.

### General

- Turn off unused computers, lights, TVs and radios when not needed.
- Turn off urns and coffee pots not being used.
- Install timers on water boiling units.
- Consider energy costs in all purchasing decisions - the additional cost of an energy efficient appliance is often repaid many times through reduced running costs over the life of the appliance.
- Consider energy efficiency when planning office fit outs and refurbishments - efficiency improvements are most cost effective when combined with other work.
- Arrange for cleaners or security to turn off any lights or equipment left on after hours.

### Did you know

If all the compatible computers in Australia were ENERGY STAR® enabled, in one year it would save companies and households more than \$200 million in energy costs and reduce greenhouse gas emissions by over 2 million tonnes. This is equivalent to taking around 500,000 cars off the road.



ENERGY SMART IS A WESTERN AUSTRALIAN GOVERNMENT INITIATIVE



Turn off...  
your computer  
your monitor  
your lights  
...before you take off.



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# Program Innovation



Agency support

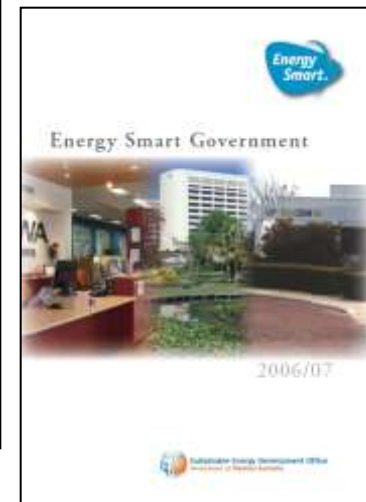
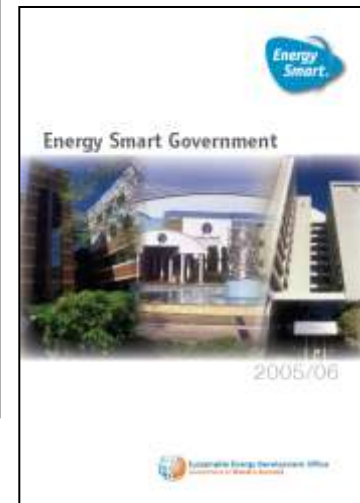
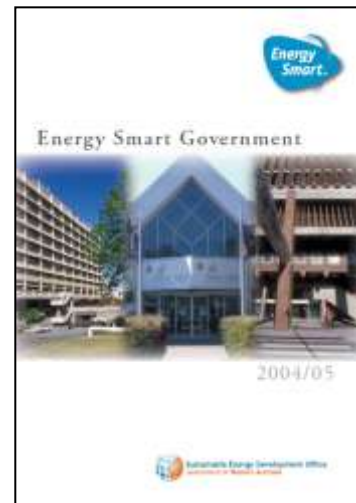
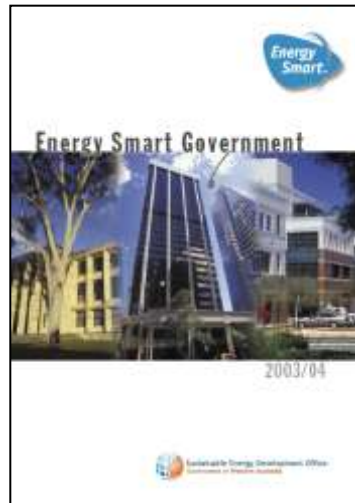
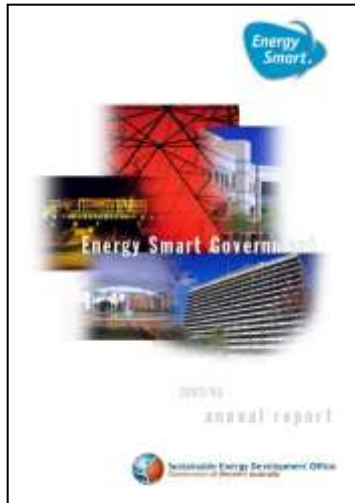
- Facilitation grants
- Capital funding

Government sustainability

Reporting software



# Reports



# Results over five years



62 participating agencies

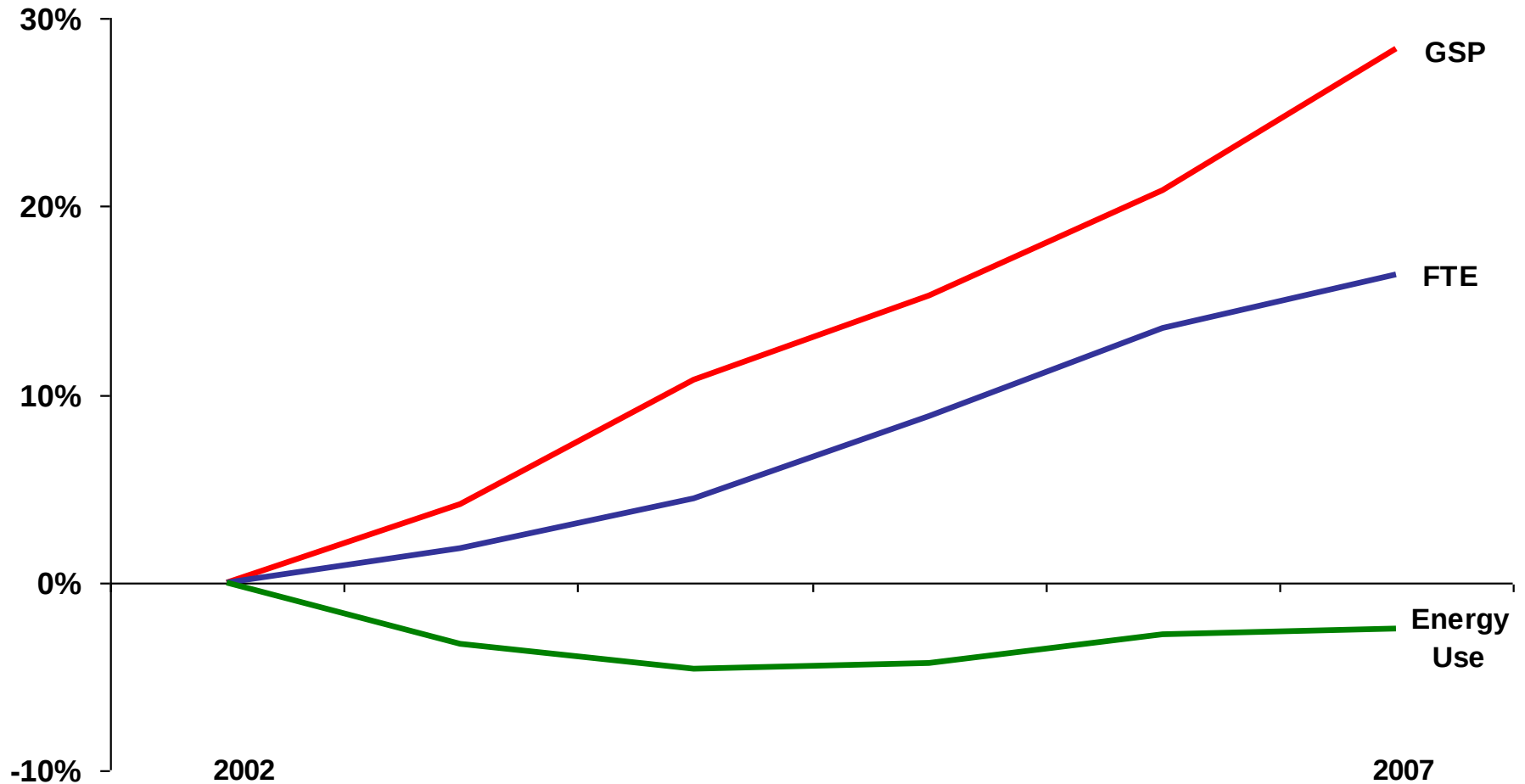
- 20 exceeded 12% absolute target (51 improved energy efficiency...)

Savings (from baseline – BAU multiple times more...)

- 500,000GJ (2.5%)
- \$13 million
- 37,500 tonnes GHG



# Development vs. Sustainability



# Results over five years



- In 2006/07, agencies achieved a 24% saving in energy use relative to a business as usual scenario based on State economic growth.
- The target for 2006/07 set in the Energy Smart Government policy was a 12% reduction in energy consumption relative to the 2001/02 baseline. Collectively, on the basis of efficiency of energy use, participating agencies exceeded that goal, delivering an energy use per employee (FTE) of 16.2% below the baseline 2001/02 level.



# Lasting Energy Savings?



- Ongoing agency reporting - OSCAR
- Performance based indicators - shift away from absolute targets toward performance based indicators
  - GJ/m<sup>2</sup>/annum
  - GJ per FTE
  - Agency specific?
- Energy Management Plans (in Premier's Circular 2011)
- Energy management – is it embedded in agency operations to ensure lasting savings?



# Energy Management Plans



- Second phase of program, 2007/08 to 2011/12, each participating agency is required to develop an *Energy Management Plan*
- Outline steps for implementing energy management, including complete, accurate and timely reporting of data, and identifying and implementing energy efficiency initiatives
- Agencies encouraged to include targets within their plans
- Energy Management Plans are signed off by the Chief Executive Officer of each agency.



# The Future?



National Framework for Energy Efficiency (NFEE)

National Strategy on Energy Efficiency (NSEE)

- COAG – 2009 onwards, includes NFEE work

NSEE = 38 measures covering all areas of energy efficiency e.g. Leadership by Government, Home & Business, Reducing Impediments to uptake;

Strategy 4 - Government working in partnership and leading the way.



# NSEE – Strategy 4



## Government working in partnership and leading the way

- 4.1.1 Governments to significantly improve the environmental performance of the buildings they own or occupy
- 4.1.2 Reduce travel and related greenhouse gas emissions
- 4.1.3 Place greater emphasis on energy efficiency as part of sustainable procurement practices (office, equipment etc)
- 4.1.4 Increase energy efficiency of street lighting



# 10 Steps to Lasting Savings



## Key steps to implementing lasting energy savings

- a formula that will enable you to successfully implement an energy management program within your organisation
- are not hard and fast rules
- but should be considered as a template for a more tailored strategy that is your energy management plan



# Steps 1 to 5



- **Step 1. Organise management resources:** Establish commitment from senior management, including specific accountability for energy management, budget allocation of financial and staff resources, and documented reporting procedures.
- **Step 2. Appoint an Energy Executive:** Appoint an Energy Executive from senior level staff. The Energy Executive's duties include overall program coordination and reporting to senior management. The Energy Executive can come from any discipline within the agency. Personal commitment and Executive support are essential requirements to fully embrace the position.
- **Step 3. Develop an energy management policy:** The energy management policy should include program outcomes, targets, key performance indicators, an energy management and action plan, resource budget, and an organisational description of staff duties.
- **Step 4. Prepare an energy management plan:** Develop a timetable for staff training and for implementation of the actions identified in your energy assessment. The action plan should be divided into short, medium and long term payback periods, capital expenditure and energy, cost and greenhouse savings. Have it endorsed and committed to by the CEO.
- **Step 5. Benchmark, monitor and report on energy use and expenditure:** Establish an information system to collect, analyse and report on energy use and expenditure, fuel types and greenhouse gas emissions. This can be phased in but the priority is to establish benchmarks prior to efficiency initiatives being undertaken - Key Performance Indicators or KPIs. This will enable you to measure the success of your program.



# Steps 6 to 10



- **Step 6. Engage meaningfully and raise awareness of staff:** Your program is unlikely to succeed without the support of staff. Maintaining motivation of staff is crucial and communicating the program strategy and results of initiatives will help achieve this. Provide staff with a sense of ownership through training and recognition for energy saving initiatives to encourage their contribution.
- **Step 7. Undertake an energy assessment or audit:** An energy assessment will identify cost effective initiatives to reduce energy consumption. Having your energy bills examined will help determine the level of assessment appropriate. Engage and utilise the experience of energy professionals. A good assessment will include recommendations, including energy and cost savings and pay back periods for energy saving initiatives.
- **Step 8. Undertake and monitor actions:** Implement projects according to the priority attached in the energy management plan. Monitor the progress of each project to ensure that budgets are maintained and projected energy and greenhouse savings are achieved within the targeted time frame.
- **Step 9. Review the results regularly:** Should be tabled and regularly reported to and considered by management. Communicated to staff to help maintain awareness and encourage ongoing commitment. Review energy at least monthly, communicate ideally at least weekly.
- **Step 10. Annual review and reporting:** The energy management plan and actions should be reviewed on a regular basis. Regular examination of the items on the plan may see a change in priority as the benefits of longer term projects increase. Reporting achievements in your annual report should be considered as a way of raising and demonstrating corporate social and environmental responsibility.



# 10 Steps to Lasting Savings



- Correlation of Agency/Departmental results and adherence to the key steps
- Some steps more important than others - first steps cant be overlooked
- Not all essential for achieving results, but all seem to be important for LASTING energy savings
- Further details, such as template for organisational Energy Management Plans and 10 Steps available from the Office Energy



.... and Finally



**Celebrate Success!!!!!!**



# Energy Champions



# Thank you;



## Questions?

### Office of Energy

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                      **Andrew Fairs**



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